

# IMPULSE GENERATOR - SYSTEM

## EMC 2015

**Plug-in system**

**Different wave forms**

**Compact**

**Portable**

**EMI-Simulator**



The impulse generator system EMC 2015 has been designed for dielectric testing of electric components, over-voltage protectors and electronic circuits acc. IEC, VDE etc. The basic version generates impulse currents with waveform 8/20  $\mu$ s and a peak value up to 25 kA. In addition, various other plug-ins are also available.

<b>PFN plug-in's:</b>	<b>Peak value</b>	<b>Wave form</b>
<b>Impulse current</b>	<b>25 kA</b>	<b>8 / 20 <math>\mu</math>s</b>
	<b>5 kA</b>	<b>10 / 50 <math>\mu</math>s</b>
	<b>600 A</b>	<b>10 / 350 <math>\mu</math>s</b>
	<b>300 A</b>	<b>10 / 700 <math>\mu</math>s</b>
	<b>200 A</b>	<b>10/1000 <math>\mu</math>s</b>
<b>Impulse voltage</b>	<b>10 kV</b>	<b>10 / 700 <math>\mu</math>s</b>
<b>Combination wave</b>	<b>2 * 10 kV</b>	<b>1.2 / 50 <math>\mu</math>s</b>
	<b>2 * 10 kA</b>	<b>8 / 20 <math>\mu</math>s</b>

Dependent upon type, pulse forming plug-ins contain high pulse-fidelity current viewing resistors, or voltage dividers, for measurement of the output parameters. The impulse output is located on the top of the equipment and provides high-current connectors for a plug-in test adapter.

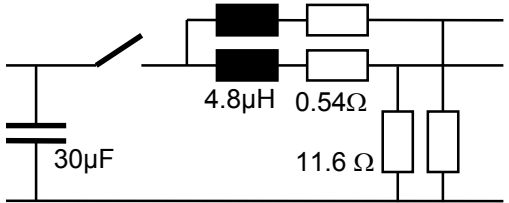
The EMC 2015 features a microprocessor controlled user interface and 5" touch screen display unit for ease of use. The microprocessor allows the user to either execute standard test routines, or a 'user defined' test sequence. A standard USB port provides the ability to print a summary of the test parameters to a USB stick.

The software program EMC-REMOTE allows full remote control of the test generator via Ethernet light guide as well as documentation and evaluation of test results, accordingly to the IEC 17025. To record definite impulses with an oscilloscope, it is equipped with an Impulse Recording Function (IRF)

Technical Specification	EMC 2015
<b>Mainframe:</b>	
Microprocessor controlled touch panel	5", 800X480, 24 bit
Optical Ethernet Interface for remote control of the generator	optional
Interface for saving reports	USB
External Trigger input	10 V on 1 k $\Omega$
External Trigger output	10 V on 1 k $\Omega$
Peak value of charging voltage, adjustable,	0.2 - 10 kV $\pm$ 2 %
Output pulse polarity, switch able	POS/NEG/ALT
max. stored energy	1500 J
Energy storage capacitor, standard version	30 $\mu$ F / 10 kV
Charging time	<20s
Connector for external safety interlock loop	24 V =
and external red and green warning lamps acc. to VDE 0104	230 V, 60W
Mains power	230 V , 50/60 Hz
Dimensions: desk top case W * H * D	556*470*600 mm <sup>3</sup>
Weight	65kg
<b>Safety test cover:</b>	
mounted on the top of the equipment, safety interlock loop connected to the limit switch, red an green warning lamps installed	
Dimensions:	ca. 440*180*300 mm <sup>3</sup>
<b>OPTION:</b>	
Software EMC-REMOTE Test, for remote control ( XP, WIN7 ) incl. 5 m fibre optic cable and PC Ethernet interface	
With Impulse Recording Function (IRF)	

## Available waveform plug-in's

<b>Impulse current plug-in: basic configuration</b>	<b>8 / 20 <math>\mu</math>s, 25 kA</b>
Impulse output current, adjustable via charging voltage	2 - 25 kA $\pm$ 5 %
Waveform of impulse output current, acc. to IEC 60060	8 / 20 $\mu$ s $\pm$ 20 %
Ringing	< 30 %
Current viewing resistor, built-in	1 m $\Omega$ , 20 MHz
<b>Impulse current plug-in:</b>	<b>10 / 50 <math>\mu</math>s, 5.0 kA</b>
Impulse output current, adjustable via charging voltage	0.2 - 5.0 kA $\pm$ 5 %
Waveform of impulse output current, acc. to IEC 60060	10 / 50 $\mu$ s $\pm$ 20 %
Ringing	< 30 %
Current viewing resistor, built-in	1 m $\Omega$ , 20 MHz
<b>Impulse current plug-in:</b>	<b>10 / 350 <math>\mu</math>s, 600 A</b>
Impulse output current, adjustable via charging voltage	50 - 600 A $\pm$ 5 %
Waveform of impulse output current, acc. to IEC 60060	10 / 350 $\mu$ s $\pm$ 20 %
Ringing	< 30 %
Current viewing resistor, built-in	10 m $\Omega$ , 20 MHz
<b>Impulse current plug-in:</b>	<b>10 / 700 <math>\mu</math>s, 300 A</b>
Impulse output current, adjustable via charging voltage	20 - 300 A $\pm$ 5 %
Waveform of impulse output current, acc. to IEC 60060	10 / 700 $\mu$ s $\pm$ 20 %
Ringing	< 30 %
Current viewing resistor, built-in	20 m $\Omega$ , 20 MHz
<b>Impulse current plug-in:</b>	<b>10 / 1000 <math>\mu</math>s, 200 A</b>
Impulse output current, adjustable via charging voltage	10 - 200 A $\pm$ 5 %
Waveform of impulse output current, acc. to IEC 60060	10 / 1000 $\mu$ s $\pm$ 20 %
Ringing	< 30 %
Current viewing resistor, built-in	20 m $\Omega$ , 20 MHz
<b>Impulse voltage plug-in: special version</b>	<b>10 / 700 <math>\mu</math>s, 10 kV</b>
Energy storage capacitor, special version!!	20 $\mu$ F / 10 kV
Impulse output voltage, adjustable via charging voltage	1.0 - 10 kV $\pm$ 5 %
Waveform of impulse output voltage, acc. to CCITT K17/K22	10 / 700 $\mu$ s $\pm$ 20 %
Impulse voltage divider, built-in	ratio 1000:1 $\pm$ 2%, 10 MHz

<p><b>Combination wave plug-in:</b> acc. to VDE 0845-2, designed for testing two gap over-voltage protectors</p>	
<p>Impulse output current, adjustable via charging voltage</p>	<p>2 * 1 - 10 kA ± 5 %</p>
<p>Waveform of impulse output current, acc. to IEC 60060</p>	<p>8 / 20 µs ±20 %</p>
<p>Ringing</p>	<p>&lt; 30 %</p>
<p>Current viewing resistor, built-in</p>	<p>1.0 mΩ, 20 MHz</p>
<p>Impulse output voltage, adjustable via charging voltage</p>	<p>10 kV ± 5 %</p>
<p>Waveform of impulse output voltage, acc. to IEC 60060</p>	<p>1.2 / 50 µs ±30 %/±20 %</p>
<p>Impulse voltage divider, built-in</p>	<p>ratio 1000:1±2 %, 10 MHz</p>